10055245

FILE 'CAPLUS' ENTERED AT 17:55:20 ON 25 NOV 2003
L1 12 SAW AND CRYSTALLIZAT? AND ACOUSTIC
L2 159 DETECT? (S) CRYSTAL? (S) (ACOUSTIC OR SAW)
L3 156 L2 AND ACOUST?
L4 7 L3 AND CRYSTALLIZ?
L5 2 PROTEIN? (S) GLYCOL (S) "DIMETHYL SULFOXIDE"

L1 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN
TI Thin film multiple layer and micro-machining device technology
L1 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN
TI Synthesis and properties of Al-based amorphous and microcrystalline thin films
L1 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN
TI A new method for supersaturation measurement. Idea, implementation and results
L1 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN
TI Synthesis of C-axis-oriented aluminum nitride films by reactive RF magnetron sputtering for surface acoustic wave
L1 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN
TI LiNbO3 and LiTaO3 thin films deposited by chemical and/or physical processes
L1 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN
TI Magnetic properties of (Fe1-xCox)89Zr11 amorphous films. I
L1 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN
TI Young's modulus and density of thin TiO2 films produced by different methods
L1 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN
TI Structural relaxation and surface diffusion of quench-condensed hydrogen films
L1 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN
TI Microstructural effects in WO3 gas-sensing films
L1 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN
TI Growth of ZnO films on GaAs substrates with a SiO2 buffer layer by RF planar magnetron sputtering for surface acoustic wave applications
L1 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN
TI Aluminum nitride films for SAW sensors
L1 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN
TI Growth of the lithium tantalate (LiTaO3) single crystals for SAW devices

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:193190 CAPLUS
DOCUMENT NUMBER: 134:303223
TITLE: Pulsed electromagnetic and acoustic emission accompanying fast crystallization of supercooled water droplets
AUTHOR(S): Shibkov, A. A.; Golovin, Yu. I.; Zheltov, M. A.; Korolev, A. A.
CORPORATE SOURCE: Tambov. Gos. Univ., Russia
SOURCE: Kristallografiya (2001), 46(1), 155-158
CODEN: KRISAJ; ISSN: 0023-4761
PUBLISHER: MAIK Nauka/Interperiodica Publishing

DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Electromagnetic and acoustic emission was detected accompanying crystn. of distd. water droplets supercooled to -30.degree.. The front of the electromagnetic pulse indicates the growth kinetics of ice in the supercooled droplet. A mechanism of generation of electromagnetic pulses is proposed based on the Workman-Reynolds effect.

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:113321 CAPLUS
DOCUMENT NUMBER: 132:157157
TITLE: Acoustic study of the melting and solidification of gallium incorporated in an opal matrix
AUTHOR(S): Dereppe, J. M.; Borisov, B. F.; Charnaya, E. V.; Shelyapin, A. V.; Nassar, M. M.; Kumzerov, Yu. A.
CORPORATE SOURCE: Institute of Physics, St. Petersburg State University, Petrodvorets, 198904, Russia
SOURCE: Physics of the Solid State (Translation of Fizika Tverdogo Tela (Sankt-Peterburg)) (2000), 42(1), 193-196
CODEN: PSOSED; ISSN: 1063-7834
PUBLISHER: MAIK Nauka/Interperiodica Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An acoustic study is reported of the crystn. and melting of gallium embedded in an opal-like matrix. The variations of the velocity and absorption of longitudinal ultrasonic waves during phase transitions in the .alpha. and .beta. modifications are hysteretic in nature. Acoustic methods do not detect gallium melting and crystn. in the tetragonal phase forming in a restricted geometry. Exptl. evidence for heterogeneous crystn. of gallium in pores has been obtained. REFERENCE COUNT: 22

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:129384 CAPLUS
DOCUMENT NUMBER: 112:129384
TITLE: "In-process monitoring of crystal perfection during melt growth"
AUTHOR(S): *Lube, E. L.; Zlatkin, A. T.*
CORPORATE SOURCE: Inst. Crystallogr., Moscow, 117333, USSR
SOURCE: **Journal of Crystal Growth (1989), 98(4), 817-26**
CODEN: JCRGAE; ISSN: 0022-0248
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A new method of in-process monitoring of crystal perfection during melt growth is proposed. The method is based on detection of acoustic emission from a growing crystal. The method places no limitations on the crystal's dimensions and material and the temp. of growth process. The method can be realized in a std. crystn. app. with slightest modification and without violation of growth conditions. The system of acoustic emission monitoring is capable of in-process detection of motion of dislocations pile-ups,

slipping, twinning, inhomogeneous impurity distribution, bubbles, liq. and solid inclusions, cracking.

L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1983:489515 CAPLUS
DOCUMENT NUMBER: 99:89515
TITLE: Effect of spinning conditions on aging of polyformaldehyde yarns
AUTHOR(S): Egorov, B. A.; Vislenko, V. I.; Shostak, T. S.; Vernaya, L. D.; Stadnik, B. N.; Vishnevskii, V. E.
CORPORATE SOURCE: USSR
SOURCE: Khimicheskaya Tekhnologiya (Kiev) (1983), (4), 17-20
CODEN: KHMTA6; ISSN: 0368-556X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Crystallinity of melt spun and 9-fold hot stretched trioxane-dioxolane copolymer [24969-26-4] fiber increased by 7-10% during postspinning period, regardless of the temp. (T) of take-off roll, although initial crystallinity and orientation of crystallites was higher in the fibers spun at T 30.degree. than at T 100-150.degree.. An increase in the crystallinity detected by using x-ray diffractometry and confirmed by acoustic and strength measurements, was ascribed to secondary crystn. This process proceeded with disorientation in amorphous regions and with increase in d. in cryst. regions, reflected by overall increase in d. of the fibers, while longitudinal and transverse dimensions of crystallites remained unchanged and decreased, resp.

L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1979:32025 CAPLUS
DOCUMENT NUMBER: 90:32025
TITLE: Acoustic effect in the crystallization and melting of gallium
AUTHOR(S): Materikin, V. L.; Pokrovskii, N. L.; Yurin, G. G.
CORPORATE SOURCE: Moscow, USSR
SOURCE: Izvestiya Akademii Nauk SSSR, Metally (1978), (5), 76-7
CODEN: IZNMAQ; ISSN: 0568-5303
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The potential existence was examd. of acoustic emission during the solid liq. phase transitions in Ga. Expts. performed in a special crystn. cell equipped with a piezoceramic sensor for the detection of acoustic effects showed that acoustic signals in the form of decaying sinusoidal waves were generated during both solidification and melting of Ga. The frequency of pulses diminished with decreasing temp. gradient. The phenomenon was assocd. with the motion of dislocations at stages preceding the formation and breakdown of the cryst. lattice of Ga.

L4 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1972:132450 CAPLUS
DOCUMENT NUMBER: 76:132450
TITLE: Acoustic effects during the crystallization of water

AUTHOR(S): Zadumkin, S. N.; Khokonov, Kh. B.
CORPORATE SOURCE: USSR
SOURCE: Trudy Vysokogornogo Geofizicheskogo Instituta (1970), No. 17, 255-9
CODEN: TVGIB5; ISSN: 0547-1869
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Schematics and descriptions of 2 apps. with $BaTiO_3$ and triglycine sulfate pressure detectors for the oscillog. observation of acoustic effects during the crystn. of water are given, and effects were found when the velocity of the crystn. boundary reached 1-2 mm/min. The frequency of the acoustic signals increased with increasing crystn. rate at practically const. amplitudes of the signals. Max. amplitudes were found at frequencies of 7-20 kHz. Similar signals were found during the melting of ice. The mechanism of the effects is given.

L5 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1974:487416 CAPLUS
DOCUMENT NUMBER: 81:87416
TITLE: Effect of cryoprotective agents on the Lowry Protein assay
AUTHOR(S): Pace, G. W.; Archer, M. C.; Tannenbaum, S. R.
CORPORATE SOURCE: Dep. Nutr. Food Sci., Massachusetts Inst. Technol., Cambridge, MA, USA
SOURCE: Analytical Biochemistry (1974), 60(2), 649-52
CODEN: ANBCA2; ISSN: 0003-2697
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effect of 3 cryoprotectants (ethylene glycol, polyvinyl pyrrolidinone, and dimethyl sulfoxide), on the Lowry protein assay were investigated. Ethylene glycol and polyvinyl pyrrolidinone both produced significant interference, whereas dimethyl sulfoxide did not. The ethylene glycol effect was mediated through some form of complexation or reaction with the alk. Cu soln. Polyvinyl pyrrolidinone, on the other hand, apparently reacted directly with the Folin reagent.

L5 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1956:78136 CAPLUS
DOCUMENT NUMBER: 50:78136
ORIGINAL REFERENCE NO.: 50:14834a-d
TITLE: A preliminary study of the properties of proteins in some nonaqueous solvents
AUTHOR(S): Rees, E. Douglas; Singer, S. J.
CORPORATE SOURCE: Yale Univ.
SOURCE: Archives of Biochemistry and Biophysics (1956), 63, 144-59
CODEN: ABBIA4; ISSN: 0003-9861
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C.A. 50, 6875a. The solubilities of 23 proteins and Na deoxyribonucleate (DNA) were tested in 37 nonaq. solvents. Most of the proteins were sol. in hydrazine and ethylenediamine; other successful solvents, in order of decreasing effectiveness, were:

propylenediamine, formamide, dimethyl sulfoxide, ethylene glycol, and N-methylacetamide. Insulin and zein dissolved in 13 and 15 solvents, resp., with a unique parallelism that suggests some similarity in the structures of the 2 unrelated proteins. DNA is sol. in hydrazine, ethylene glycol, and formamide. In freshly prepd. hydrazine and ethylenediamine solns., soly., ultracentrifuge, and viscosity expts. indicate that protein mols. are unfolded and elongated in comparison with their structures in aq. solns. In hydrazine, DNA mols. appear to undergo some structural alteration. Trypsin dissolves in formamide and di-Me sulfoxide, and retains its enzymic activity when recovered from these solns. and placed in aq. media. Osmotic-pressure detns. with insulin in dimethylformamide and dimethylacetamide show that the fundamental covalently bonded unit of the mol. has a mol. wt. of about 6000 and therefore contains 1 A and 1 B chain.

FILE 'CAPLUS' ENTERED AT 19:05:20 ON 26 NOV 2003
L1 0 (ACOUSTIC (2A) DEPOSIT?) AND PICOLITER
L2 4 ACOUSTIC AND PICOLITER?
L3 0 PROTEIN? AND POLYETHYLENGLYCOL AND "DIMETHYL SULFOXIDE"
L4 1 POLYETHYLENGLYCOL AND TABLET?

L2 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:658320 CAPLUS
DOCUMENT NUMBER: 137:165848
TITLE: High-throughput biomolecular crystallization and biomolecular crystal screening
INVENTOR(S): Mutz, Mitchell W.; Ellson, Richard N.; Stearns, Richard G.
PATENT ASSIGNEE(S): Picoliter Inc., USA
SOURCE: PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
PATENT NO. KIND DATE APPLICATION NO. DATE
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WO 2002066713 A1 20020829 WO 2002-US1894 20020122
EP 1352112 A1 20031015 EP 2002-709140 20020122
PRIORITY APPLN. INFO.: US 2001-765947 A 20010119
WO 2002-US1894 W 20020122
AB The present invention provides a method for the acoustic ejection of fluid droplets from fluid-contg. reservoirs to form arrays suitable for high-throughput combinatorial crystn. expts. Such arrays may utilize very small fluid vols., in the order of picoliters. The method is esp. suited to prepg. combinatorial libraries useful in developing techniques for crystg. biomacromols., such as proteins. The small vols. conserve macromols. that may be costly and rare, and permit the testing of a large no. of exptl. crystn. conditions for a given amt. of a macromol. The time required for the expts. may be very short due to the small vols. The invention is conductive to forming high-d.

microarrays of small vols. Acoustic detection of crystals in situ, and distinction between biomacromol. crystals, are also taught. REFERENCE COUNT: 5

L2 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:236548 CAPLUS
TITLE: Focused acoustic energy method and device for generating droplets of immiscible fluids
INVENTOR(S): Ellson, Richard N.; Mutz, Mitchell W.; Foote, James K.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., Cont.-in-part of Ser. No. US 2000-669194, filed on 25 Sep 2000
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
PATENT NO. KIND DATE APPLICATION NO. DATE
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US 2002037375 A1 20020328 US 2001-962730 20010924
US 6548308 B2 20030415
WO 2002026394 A1 20020404 WO 2001-US30005 20010925
AU 2001093086 A5 20020408 AU 2001-93086 20010925
EP 1322430 A1 20030702 EP 2001-973516 20010925
US 2002155231 A1 20021024 US 2002-112693 20020328
US 6642061 B2 20031104
PRIORITY APPLN. INFO.: US 2000-669194 A2 20000925
US 2001-962730 A 20010924
WO 2001-US30005 W 20010925
AB A method and device for generating droplets of immiscible fluids are provided. Extremely fine droplets may be generated, on the order of 1 picoliter or less, using focused acoustic energy to eject the droplets from a reservoir containing two or more immiscible fluids. Optionally, the droplets may be ejected onto discrete sites on a substrate surface so as to form an array thereon.

L2 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:593697 CAPLUS
DOCUMENT NUMBER: 129:304064
TITLE: "A new device for multifunctional dosage of liquids by a free jet"
AUTHOR(S): *Hey, N.; Freygang, M.; Gruhler, H.; Sandmaier, H.; Zengerle, R.*
CORPORATE SOURCE: Hahn-Schickard-Gesellschaft, Institute of Micromachining and Information Technology, Villingen-Schwenningen, D-78052, Germany
SOURCE: **Proceedings - IEEE Annual International Workshop on Micro Electro Mechanical Systems: An Investigation of Micro Structures, Sensors, Actuators, Machines and Systems, 11th, Heidelberg, Jan. 25-29, 1998 (1998), 429-431. Institute of Electrical and Electronics Engineers: New York, N. Y.**
CODEN: 66QZAZ
DOCUMENT TYPE: Conference
LANGUAGE: English

AB A new multifunctional device is presented for the first time dosing liqs. of high precision in the range of a few picoliter up to 230 nL by a single free liq. jet. In contrast to the working principle of ink jet heads the device is comprising two operating modes, the novel high dynamic vol. ejection for nanoliter dosage, named LiquiJet-Mode, in addn. to the acoustic wave technique of ink jet heads used for picoliter dosage (LiquiDrop-Mode). The device has been realized and successfully tested with liqs. in the viscosity range from 1 mPas to 80 mPas. REFERENCE COUNT: 3

L2 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:318819 CAPLUS
DOCUMENT NUMBER: 120:318819
TITLE: Microfabricated reactor for PCR or other application
INVENTOR(S): Northrup, M. Allen; White, Richard M.
PATENT ASSIGNEE(S): Reagents of the University of California, USA
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9405414	A1	19940317	WO 1993-US8015	19930831
US 5639423	A	19970617	US 1992-938106	19920831
AU 9350921	A1	19940329	AU 1993-50921	19930831
JP 07508928	T2	19951005	JP 1994-507297	19930831
JP 3002541	B2	20000124		
EP 711200	A1	19960515	EP 1993-920348	19930831
US 5646039	A	19970708	US 1995-473275	19950606

PRIORITY APPLN. INFO.: US 1992-938106 A 19920831
WO 1993-US8015 W 19930831
AB An integrated microfabricated instrument is disclosed for manipulation, reaction, and detection of microliter to picoliter samples. The instrument is suited for biochem. reactions, particularly DNA-based reactions (e.g. PCR) that require thermal cycling, since the inherently small size of the instrument facilitates rapid cycle times. The integrated nature of the instrument provides accurate, contamination-free processing. The instrument may include reagent reservoirs, agitators and mixers, heaters, and optical or electromech. sensors. Ultrasonic Lamb-wave devices may be used as sensors, pumps, and agitators. Diagrams of the app. are included. The app. was used to amplify a specific HIV nucleic acid sequence.

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:190451 CAPLUS
DOCUMENT NUMBER: 128:221570
TITLE: Compression study of paracetamol solid dispersion tablets
AUTHOR: Tasic, Ljiljana; Pintye-Hodi, K.; Stupar, M.; Kasa, P., Jr.; Szabo, Revesz, P.
CORPORATE SOURCE: Pharmaceutical Technol. Dep., Fac. Pharmacy, Belgrade Univ., Belgrade, 11221, Yugoslavia
SOURCE: Pharmazie (1998), 53(3), 206-207

CODEN: PHARAT; ISSN: 0031-7144
PUBLISHER: Govi-Verlag Pharmazeutischer Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The compression ability was examd. of paracetamol (PAR) solid dispersion (SD) made by a spraying process with ethylcellulose (Ethocel) and polyethylenglycol 6000 (Macrogol 6000) using SEM. SEM investigation of PAR tablets showed that the PAR is compressed by brittle fracture and the microcryst. cellulose (MCC) by the mechanism of plastic deformation. Crushing strength of the tablet was 16 kp, and the tensile strength 1.9834 MN m-2. The porous structure of this PAR enhances good water penetration. A relatively high value of elastic recovery was affected from fracture of PAR crystal during compression and decompression phase of consolidation. SEM investigations of surface textures, the surface of the broken tablet, and the side of the tablets made by PAR SD showed a plastically deformed surface. Interparticular bonds are strong and come from MCC and particles of SD. The connections survived the decompression and had a value of tensile strength of 2.48 MN m-2 and a crushing strength of >20 kp.

	Hits	Search Text
1	2	"20030096421"
2	12	(protein$2 or biologic$3 or nucleic$3) with ((ultrasound or acoustic) near4 (deposit$4 or dispens$4))
3	234	(protein$2 or biologic$3 or nucleic$3) with (deposit$4 or dispens$4) with crystal$5
4	71	(protein$2 or biologic$3 or nucleic$3) with (deposit$4 or dispens$4) with crystalliz$5
5	5	(protein$2 or biologic$3 or nucleic$3) with crystalliz$5 with ("high throuput" or combinator$5)
6	2	("6063339").PN.
7	449	((protein$2 or biologic$3 or nucleic$3) with crystalliz$5) and ("high throuput" or combinator$5)
8	1225	((protein$2 or biologic$3 or nucleic$3) with crystalliz$5) and ("high throuput" or screen$5)
9	137	((protein$2 or biologic$3 or nucleic$3) with crystalliz$5) with ("high throuput" or screen$5)
10	18	(((protein$2 or biologic$3 or nucleic$3) with crystalliz$5) with ("high throuput" or screen$5)) and (surfact$2 or chaotrop$3)
11	76	(((protein$2 or biologic$3 or nucleic$3) with crystalliz$5) with ("high throuput" or screen$5)) and temperature$2 and pressure
12	183	crystal$5 with (acoustic near3 detect$4)
13	145	crystal$5 near5 (acoustic near5 detect$4)
14	7	(crystal$5 near5 (acoustic near5 detect$4)) and crystallization
15	12	SAW with crystallization

	Hits	Search Text
16	26	protein$2 with glycol with "dimethyl sulfoxide"
17	2	("5565113").PN.
18	2	("4697195").PN.
19	73	(acoust$4 near3 eject$4) with (volume or size)
20	53	(acoust$4 near3 eject$4) with volume
21	34	(acoust$4 near3 eject$4) with (volume near4 drop$5)
22	42	((acoust$4 near3 eject$4) with (volume or size)) and picoliter$2
23	346297	protein$2 polyethylenglycol with "dimethyl sulfoxide"
24	0	protein$2 with polyethylenglycol with "dimethyl sulfoxide"
25	12	protein$2 and polyethylenglycol and "dimethyl sulfoxide"
26	2492	(436/86,174,180,).CCLS.
27	405	((436/86,174,180,).CCLS.) and crystal$5
28	144	((436/86,174,180,).CCLS.) and (acoust$4 or ultrasound)